

1 Claims

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4 1. A pharmaceutical formulation comprising an
5 active agent and at least one excipient, wherein at
6 the least one excipient comprises a β -limit dextrin.

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8 2. A pharmaceutical formulation as claimed in
9 Claim 1 in which the β -limit dextrin is a carrier
10 for the active agent.

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12 3. A pharmaceutical formulation as claimed in
13 Claims 1 or 2 in which the active agent is a
14 pharmaceutically active agent.

15

16 4. A pharmaceutical formulation as claimed in
17 Claims 1, 2 or 3 which is a bioadhesive
18 pharmaceutical formulation.

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20 5. A bioadhesive pharmaceutical formulation as
21 claimed in Claim 4 which is a buccal-melt type
22 product.

23

24 6. A bioadhesive pharmaceutical formulation as
25 claimed in Claim 5 which is a wafer.

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27 7. A bioadhesive pharmaceutical formulation as
28 claimed in Claim 4 which is a powder for use in
29 aerosol delivery formulations.

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31 8. A bioadhesive pharmaceutical formulation as
32 claimed in Claim 4 which is a thin film.

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2 9. A bioadhesive pharmaceutical formulation as
3 claimed in any of Claims 4 to 8 further including at
4 least one carbohydrate.

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6 10. A bioadhesive pharmaceutical formulation as
7 claimed in Claim 9 in which the at least one
8 carbohydrate is a polysaccharide.

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10 11. A bioadhesive pharmaceutical formulation as
11 claimed in Claim 9 in which the at least one
12 carbohydrate is selected from the group comprising:
13 alginate; pectin; and derivatives of alginate and
14 pectin.

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16 12. A bioadhesive pharmaceutical formulation as
17 claimed in Claim 11 in which the alginate comprises
18 between 1 and 50% of the formulation (w/w).

19

20 13. A bioadhesive pharmaceutical formulation as
21 claimed in Claim 12 in which the alginate comprises
22 between 10 and 30% of the formulation (w/w).

23

24 14. Use of β -limit dextrin as a mucoadhesive
25 carrier.

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27 15. Use of β -limit dextrin as a mucoadhesive
28 carrier in a pharmaceutical formulation.

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30 16. Use of β -limit dextrin as a mucoadhesive
31 carrier in a thin-film breath freshener.

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1 17. A pharmaceutical formulation as claimed in
2 Claim 1 or 2 which is a buccal melt product.

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4 18. A pharmaceutical formulation as claimed in any
5 preceding Claim in a form selected from the group
6 comprising: particulate; capsule; tablet; freeze
7 dried matrix; wafer; and liquid.

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9 19. A liquid pharmaceutical formulation comprising
10 an active agent, and a dispersant for the active
11 agent, wherein the dispersant comprises a β -limit
12 dextrin.

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14 20. Use of β -limit dextrin as a dispersant in
15 liquid pharmaceutical formulations.

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17 21. Use of β -limit dextrin as an excipient in a
18 pharmaceutical formulation.

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20 22. A nutritional product comprising β -limit
21 dextrin.

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23 23. A nutritional product as claimed in Claim 22 in
24 which the β -limit dextrin is a main energy source in
25 the product.

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27 24. A nutritional product as claimed in Claim 22 or
28 23 which is an energy drink.

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30 25. A nutritional product as claimed in Claim 22 or
31 23 which is a confectionery product.

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2 26. Use of β -limit dextrin as an energy source in a
3 nutritional product.

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5 27. Use of β -limit dextrin as an energy source in
6 an energy drink.

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8 28. Use of β -limit dextrin as a carrier of
9 nutrients in an energy drink.

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11 29. A formulation, product, or use as claimed in
12 any preceding Claim in which the β -limit dextrin is
13 obtainable by hydrolysing starch.

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15 30. A formulation, product, or use as claimed in
16 Claim 29 in which the β -limit dextrin is obtainable
17 by hydrolysing starch with β -amylase.

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19 31. A formulation, product, or use as claimed in
20 Claim 29 or 30 in which the starch is a waxy starch.

AMENDED CLAIMS

- 1 [received by the International Bureau on 12 March 2004 (12.03.04);
2 original claims 1 to 31 replaced by amended claims 1 to 25;]
3
- 4 1. A bioadhesive pharmaceutical formulation
5 comprising an active agent and a mucoadhesive
6 carrier for the active agent, wherein the
7 mucoadhesive carrier comprises a β -limit dextrin.
8
- 9 2. A bioadhesive pharmaceutical formulation as
10 claimed in Claim 1 in which the β -limit dextrin is
11 obtainable by hydrolysing starch with β -amylase.
12
- 13 3. A bioadhesive pharmaceutical formulation as
14 claimed in Claims 1 or 2 in which the active agent
15 is a pharmaceutically active agent.
16
- 17 4. A bioadhesive pharmaceutical formulation as
18 claimed in any preceding claim which is a buccal-
19 melt type product.
20
- 21 5. A bioadhesive pharmaceutical formulation as
22 claimed in Claim 4 which is a wafer.
23
- 24 6. A bioadhesive pharmaceutical formulation as
25 claimed in any of Claims 1 to 3 which is a powder
26 for use in aerosol delivery formulations.
27
- 28 7. A bioadhesive pharmaceutical formulation as
29 claimed in any of Claims 1 to 3 which is a thin
30 film.
31

1 8. A bioadhesive pharmaceutical formulation as
2 claimed in any preceding claims further including at
3 least one carbohydrate.

4

5 9. A bioadhesive pharmaceutical formulation as
6 claimed in Claim 8 in which the at least one
7 carbohydrate is a polysaccharide.

8

9 10. A bioadhesive pharmaceutical formulation as
10 claimed in Claim 8 in which the at least one
11 carbohydrate is selected from the group comprising:
12 alginate; pectin; and derivatives of alginate and
13 pectin.

14

15 11. A bioadhesive pharmaceutical formulation as
16 claimed in Claim 10 in which the alginate comprises
17 between 1 and 50% of the formulation (w/w).

18

19 12. A bioadhesive pharmaceutical formulation as
20 claimed in Claim 11 in which the alginate comprises
21 between 10 and 30% of the formulation (w/w).

22

23 13. Use of β -limit dextrin as a mucoadhesive
24 carrier.

25

26 14. Use of β -limit dextrin as a mucoadhesive
27 carrier in a pharmaceutical formulation.

28

29 15. Use of β -limit dextrin as a mucoadhesive
30 carrier in a thin-film breath freshener.

31

- 1 16. A bioadhesive pharmaceutical formulation as
2 claimed in any of Claims 1 to 12 in a form selected
3 from the group comprising: particulate; capsule;
4 tablet; freeze dried matrix; wafer; liquid; and thin
5 film.
6
- 7 17. A nutritional product comprising β -limit
8 dextrin in which the β -limit dextrin is a main
9 energy source in the product.
10
- 11 18. A nutritional product as claimed in Claim 17
12 which is an energy drink.
13
- 14 19. A nutritional product as claimed in Claim 17 or
15 18 which is a confectionery product.
16
- 17 20. Use of β -limit dextrin as an energy source in a
18 nutritional product.
19
- 20 21. Use of β -limit dextrin as a slow release energy
21 source in a nutritional product.
22
- 23 22. Use as claimed in Claim 20 or 21 in which the
24 nutritional product is an energy drink.
25
- 26 23. A formulation, or use, as claimed in any
27 preceding Claim in which the β -limit dextrin is
28 obtainable by hydrolysing starch.
29

1 24. A formulation, or use, as claimed in Claim 23
2 in which the β -limit dextrin is obtainable by
3 hydrolysing starch with β -amylase.

4

5 25. A formulation, or use as claimed in Claim 23 or
6 24 in which the starch is a waxy starch.